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UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450

## NOTICE OF ALLOWANCE AND FEE(S) DUE

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04/09/2004

HOGAN & HARTSON L.L.P. 500 S. GRAND AVENUE SUITE 1900 LOS ANGELES, CA 90071-2611 EXAMINER
YOHA, CONNIE C

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 04/09/2004

1	APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
	10/720.500	11/24/2003	Yoshikazu Fujimori	81919.0017	4569

TITLE OF INVENTION: DATA HOLDING DEVICE AND DATA HOLDING METHOD

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1330	\$300	\$1630	07/09/2004

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. <u>PROSECUTION ON THE MERITS IS CLOSED</u>. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.

□ Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

#### PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail

Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Alexandria, Virginia 22313-1450 (703) 746-4000 or <u>Fax</u> INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission. CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1) 04/09/2004 000026021 7590 **HOGAN & HARTSON L.L.P.** Certificate of Mailing or Transmission I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO, on the date indicated below. 500 S. GRAND AVENUE **SUITE 1900** LOS ANGELES, CA 90071-2611 (Depositor's name (Signature (Date ATTORNEY DOCKET NO. CONFIRMATION NO. APPLICATION NO. FILING DATE FIRST NAMED INVENTOR 4569 11/24/2003 Yoshikazu Fujimori 81919.0017 TITLE OF INVENTION: DATA HOLDING DEVICE AND DATA HOLDING METHOD PUBLICATION FEE TOTAL FEE(S) DUE DATE DUE APPLN, TYPE SMALL ENTITY **ISSUE FEE** 07/09/2004 \$1330 \$300 \$1630 NO nonprovisional **EXAMINER** ART UNIT CLASS-SUBCLASS YOHA, CONNIE C 2818 365-156000 1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). 2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer attorneys or agents. If no name is listed, no name will be printed. Number is required. 3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type) PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment. (B) RESIDENCE: (CITY and STATE OR COUNTRY) (A) NAME OF ASSIGNEE ☐ individual ☐ corporation or other private group entity Please check the appropriate assignee category or categories (will not be printed on the patent); 4a. The following fee(s) are enclosed: 4b. Payment of Fee(s): ☐ Issue Fee A check in the amount of the fee(s) is enclosed. □ Payment by credit card. Form PTO-2038 is attached. ☐ Publication Fee ☐ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number \_\_\_\_\_\_ (enclose an extra copy of this form). Advance Order - # of Copies Director for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. (Authorized Signature) (Date) NOTE; The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Department of Commerce, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/720,500	11/24/2003	Yoshikazu Fujimori	81919.0017	81919.0017 4569	
000026021 7590 04/09/2004 HOGAN & HARTSON L.L.P. 500 S. GRAND AVENUE SUITE 1900			EXAM	EXAMINER	
			YOHA, CONNIE C		
			ART UNIT	PAPER NUMBER	
LOS ANGELE	, CA 90071-2611		2818		
		DATE MAILED: 04/09/2004			

### Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

	Application No.	Applicant(s)	
	10/720,500	FUJIMORI, YOSHIKAZU	
Notice of Allowability	Examiner	Art Unit	
	Connie C. Yoha	2818	
The MAILING DATE of this communication apperature All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIOF the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in this ap or other appropriate communication IGHTS. This application is subject to	plication. If not included will be mailed in due course. <b>THIS</b>	
1. $\boxtimes$ This communication is responsive to <u>application filed 11/2</u>	<u>4/03</u> .		
2. The allowed claim(s) is/are <u>1-25</u> .			
3. $\boxtimes$ The drawings filed on <u>24 November 2003</u> are accepted by	the Examiner.		
<ul> <li>4.  Acknowledgment is made of a claim for foreign priority unally All b)  Some* c) None of the:  1.  Certified copies of the priority documents have 2.  Certified copies of the priority documents have 3.  Copies of the certified copies of the priority do International Bureau (PCT Rule 17.2(a)).  * Certified copies not received:  Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONN THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.</li> <li>5.  A SUBSTITUTE OATH OR DECLARATION must be submin INFORMAL PATENT APPLICATION (PTO-152) which give 6.  CORRECTED DRAWINGS (as "replacement sheets") must (a)  including changes required by the Notice of Draftspers 1)  hereto or 2)  to Paper No./Mail Date  (b)  including changes required by the attached Examiner' Paper No./Mail.Date  Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in to the depolar to the</li></ul>	e been received. e been received in Application No cuments have been received in this of this communication to file a reply MENT of this application.  Initted. Note the attached EXAMINER es reason(s) why the oath or declara est be submitted. Is on's Patent Drawing Review ( PTO- IS Amendment / Comment or in the CO IS A4(c)) should be written on the drawing the header according to 37 CFR 1.121( ISSIST OF BIOLOGICAL MATERIAL IN	national stage application from the complying with the requirements  S AMENDMENT or NOTICE OF ation is deficient.  948) attached  Office action of the back) of d).  must be submitted. Note the	
Attachment(s)  1. ☑ Notice of References Cited (PTO-892)  2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  3. ☑ Information Disclosure Statements (PTO-1449 or PTO/SB/0 Paper No./Mail Date 11/03  4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material	5. Notice of Informal F 6. Interview Summary Paper No./Mail Da 7. Examiner's Amendi	Patent Application (PTO-152)  (PTO-413), te ment/Comment ent of Reasons for Allowance	

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#### **DETAILED ACTION**

- This office acknowledges receipt of the following item from the Applicant:
  Information Disclosure Statement (IDS) filed on 11/24/03 and it was consider.
  Papers submitted under 35 U.S.C. 119(a)-(d) have been placed of record in the file.
- 2. Claims 1-22 are presented for examination.

#### REASONS FOR ALLOWANCE

3. The following is an examiner's statement of reasons for allowance:

Claims 1-22 are considered allowable since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. The prior art does not teach the claimed invention having a method and data holding device among other features including: a data holding circuit with first and second inverter circuits; a nonvolatile memory element which records a state corresponding to data existing in the data holding circuit, with one end of the nonvolatile memory element connected to an input node of the first inverter circuit at the time of writing data, and which discharges an electric charge which corresponds to the nonvolatile state recorded in the nonvolatile memory element and which can generate a voltage higher or lower than the threshold voltage of the first inverter circuit at the input node of the first inverter circuit and reading signal is applied to the other end of the nonvolatile memory element at the time of restoring data; the data holding circuit having a loop switching gate which is interposed between a nonvolatile memory element

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connecting node defined as a connecting node between the input node of the first inverter circuit and the one end of the nonvolatile memory element. Prior art also does not disclose data holding circuit, and a variable resistance element interposed between a memory node of the data holding circuit and a reference potential; a nonvolatile memory element for controlling the resistance value of the variable resistance element, wherein a state corresponding to data stored in the data holding circuit is recorded in the nonvolatile memory element, and data corresponding to a state recorded are restored in the data holding circuit.

- 4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."
- 5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tai (5592411), Miyamoto et al (6493267) and Komatsuzaki (6707702) disclose nonvolatile memory device and methods having flip-flop or inverters circuit for storing or holding data in the semiconductor device.

### Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (571) 272-1799. The examiner can normally be reached on Mon. - Fri. from 8:00 A.M. to 5:30 PM. The examiner's supervisor, David Nelms, can be reached at (571) 272-1787. The fax phone

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number for this Group is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <a href="http://pair-direct.uspto.gov">http://pair-direct.uspto.gov</a> should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.Yoha

March 2004

Connie C. Yoha

AU 2818